DETAILED ACTION

1.   Claims 25-26, 29-36, and 42-48 have been presented for examination.

         Claims 1-24, 27-28, and 37-41 have been cancelled.

Examiners Amendment

2.   An examiner's amendment to the record appears below. Should the changes and/or additions be

unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of

such an amendment, it MUST be submitted no later than the payment of the issue fee.

         Authorization for this examiner's amendment was given in a telephone interview with Irene Lin, L0630, on

1 July 2010.

         The application has been amended as follows:

         i)   **Amend claim 25:**

25.   (Currently Amended) A printed circuit board design instruction support device that supports printed circuit board design between a circuit design and a printed circuit board design, said device comprising:

means for reading a circuit diagram designed by the circuit design;

means for storing design instruction information regarding the printed circuit board design and keywords, which are associated with said design instruction information and set corresponding to the type of items included in said circuit diagram; [[and]]

means for extracting keywords corresponding to the type of items included in the read circuit diagram and automatically displaying design instruction information associated with the extracted keywords, when the circuit diagram is read by said reading means; and

means for extracting damping resistances including the attribute of series connection from the circuit diagram read by said reading means, judging whether or not said resistances are damping resistances by discriminating whether or not items connected to the pins of the extracted resistances are ICs, and automatically extracting damping resistances that are correctly arranged based on a design rule in arranging and target ICs of the resistances, from the circuit diagram read by said reading means, wherein

said design instruction is made up of design implementation information showing information whether or not a circuit board designed was performed according to a design instruction and printed circuit board design instruction support implementation information to which check result information of printed circuit board design instruction support is input, and

said storing means is database in which design instruction and said keywords are listed in a divided manner.

ii)   **Cancel claim 28.**

iii)   **Amend claim 36:**

The printed circuit board design instruction support device according to any one of claims 25, 26, 28, 29, 30, 31, 32, 33 and 34, said device comprising:

means for managing whether or not a printed circuit board design was performed according to said design instruction information, by accepting the input of a result in which said design instruction information was reflected on the printed circuit board design and accepting an agreement to said result, wherein

said result is identifiably displayed on a display screen while the color and/or brightness of said items are changed and;

the device is capable of simultaneously displaying areas to be checked on both of a circuit diagram and a printed circuit board layout diagram for each circuit part.

iv)   **Amend claim 42:**

A program for allowing a computer to function as the printed circuit board design instruction support device according to any one of claims 25, 26, ~~28~~, 29, 30, 31, 32, 33 and 34.

v)   **Amend claim 44:**

44.   (Currently Amended) A printed circuit board design instruction support method in which printed circuit board design is supported between a circuit design and a printed circuit board design, said method comprising the steps of:

using a computer to execute the following steps;

reading a circuit diagram designed by the circuit design;

storing design instruction information regarding the printed circuit board design and keywords, which are associated with said design instruction information and set corresponding to the type of items included in said circuit diagram; [[and]]

extracting keywords corresponding to the type of items included in the read *circuit design* and displaying design instruction information associated with the extracted keywords, when the circuit design is read by said reading step; and

extracting damping resistances including the attribute of series connection from the circuit diagram, judging whether or not said resistances are damping resistances by discriminating whether or not items connected to the pins of the extracted resistances are ICs, and automatically extracting damping resistances that are correctly arranged based on a design rule in arranging and target ICs of the resistances, from the circuit diagram read, wherein

said design instruction information is made up of design implementation information showing information whether or not a circuit board designed was performed according to a design instruction and printed circuit board design instruction support implementation information to which check result information of printed circuit board design support implementation is input, and

said storing step is listing design instruction and said keywords in a divided manner.

vi)   **Add new claim 47:**

47.   (New) A printed circuit board design instruction support device that supports printed circuit board design between a circuit design and a printed circuit board design, said device comprising:

means for reading a circuit diagram designed by the circuit design;

means for storing design instruction information regarding the printed circuit board design and keywords, which are associated with said design instruction information and set corresponding to the type of items included in said circuit diagram;

means for extracting keywords corresponding to the type of items included in the read circuit diagram and automatically displaying design instruction information associated with the extracted keywords, when the circuit diagram is read by said reading means; and

means for extracting capacitors, which are connected to a power source and ground, from the circuit diagram read by said reading means, judging whether or not said capacitors are bypass capacitors by discriminating whether or not the extracted capacitors are capacitors to which an IC is connected to the power source side, and automatically extracting bypass capacitors and target ICs of the capacitors from the circuit diagram read by said reading means, wherein

said design instruction is made up of design implementation information showing information whether or not a circuit board designed was performed according to a design instruction and printed circuit board design instruction support implementation information to which check result information of printed circuit board design instruction support is input, and

said storing means is database in which design instruction and said keywords are listed in a divided manner.

vii)   Add new claim 48:

48.   A printed circuit board design instruction support method in which printed circuit board design is supported between a circuit design and a printed circuit board design, said method comprising the steps of:

using a computer to execute the following steps;

reading a circuit diagram designed by the circuit design;

storing design instruction information regarding the printed circuit board design and keywords, which are associated with said design instruction information and set corresponding to the type of items included in said circuit diagram;

extracting keywords corresponding to the type of items included in the read circuit design and displaying design instruction information associated with the extracted keywords, when the circuit design is read by said reading step; and

extracting capacitors, which are connected to a power source and ground, from the circuit diagram, judging whether or not said capacitors are bypass capacitors by discriminating whether or not the extracted capacitors are capacitors to which an IC is connected to the power source side, and automatically extracting bypass capacitors and target ICs of the capacitors from the circuit diagram, wherein

said design instruction information is made up of design implementation information showing information whether or not a circuit board designed was performed according to a design instruction and printed circuit board design instruction support implementation information to which check result information of printed circuit board design support implementation is input, and

said storing step is listing design instruction and said keywords in a divided manner.

Allowable Subject Matter

3.   The following is an examiner's statement of reasons for allowance: claims 25-26, 29-36, and 42-48 are

considered allowable since when reading the claims in light of the specification, none of the references of record

alone or in combination disclose or suggest the combination of limitations specified in the independent claims,

specifically:

The recitation with respect to the claims

means for extracting damping resistances including the attribute of series
connection from the circuit diagram read by said reading means, judging whether or not
said resistances are damping resistances by discriminating whether or not items
connected to the pins of the extracted resistances are ICs, and automatically extracting
damping resistances that are correctly arranged based on a design rule in arranging and
target ICs of the resistances, from the circuit diagram read by said reading means,
wherein
                                                                                                                    an

means for extracting capacitors, which are connected to a power source and
ground, from the circuit diagram read by said reading means, judging whether or not said
capacitors are bypass capacitors by discriminating whether or not the extracted capacitors
are capacitors to which an IC is connected to the power source side, and automatically
extracting bypass capacitors and target ICs of the capacitors from the circuit diagram read
by said reading means, wherein

d

The claims are rendered statutory since they recite as per claims 25 and 47 a hardware device and claims 44

and 48 reciting using a computer to execute the method steps.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue

fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly

labeled "Comments on Statement of Reasons for Allowance."

<div align="center">***Conclusion***</div>

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saif A. Alhija whose telephone number is (571) 272-8635. The examiner can normally be reached on M-F, 11:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAA   /Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

July 1, 2010